

NNSS LOCATIONS



NNSS SOLUTIONS FOR SITUATIONAL AWARENESS NEEDS

About the NNSS

The Nevada National Security Site (NNSS) provides unique and indispensable capabilities in support of the research, defense, national security and non-defense activities. The NNSS offers multi-modal seismic, acoustic, chemical, radiological/nuclear, radio frequency (RF) and optical sensing capabilities with advanced telemetry focusing on data reliability for processing and archiving of data from sensors, as well as high hazard testing and diagnostics with capabilities for testing novel technologies, and multiple training venues and facilities. The NNSS has the expertise in delivering novel solutions for unique specifications.

Seismic Sensing

- Advanced seismic sensors for atmospheric and subsurface monitoring with the ability of rapid deployment
- Geotechnical surveys for model confirmation and verification
- Deployment of novel technologies for customer testing and data acquisition
- Ability to analyze seismic signals to get insights into the movement of people, animals and vehicles; earthquake and hydrological activity; wind and weather events; and more.

Acoustic Sensing

- Unique infrared sensing with novel wind noise reduction techniques
- Omni-directional overpressure sensors
- Long and short distance explosive monitoring
- Experience with large scale infrasound array deployments to measure infrasound baseline in large metropolitan areas
- Distributed acoustic sensing for continuous monitoring and enhanced situational awareness
- Ability to collect a wide range of data products at terrestrial field site, including meteorological data, vegetation structure and composition, community composition and pathogen data for small mammals and insects, soil chemistry, carbon and nutrient fluxes and more.

 **Optical Sensing**

- Low power, long duration sensors to transmit data with minimal power draws
- Long-range exfoliation of data in unique and extreme environments
- Subterranean monitoring capabilities with commercial off-the-shelf sensors
- Remote sensing with active and passive sensing capabilities
- Hyper-spectral image to enable better characterization and identification of targets
- Optical remote sensing for high resolution mapping
- Optical sensing technology provides the ability to communicate information at high bandwidths from mobile platforms while identifying chemical, biological and nuclear threats.

 **Radio Frequency Sensing**

- Solar powered while leaving behind nodes to monitor and assess RF spectrum and identify anomalous behavior
- Signal analysis and electromagnetic assessment of RF spectrum to determine baseline using AI/ML modeling
- Identification of pathways adversaries could exploit and disrupt mission operations
- Detection of activities in a non-cooperating environment
- Establish RF signature portfolio
- Ability to sense important signals of interest in a crowded spectrum

 **Chemical Sensing**

- Novel technology deployments for manned or unmanned sensing systems and instrumentation
- Advanced telemetry, data acquisition and data processing capabilities for classified and unclassified data
- Passive infrared systems for remote chemical detection and characterization
- Ability to make and detonate large quantities of homemade explosives and perform large-scale chemical releases
- Ability to create improvised chemical device event in test environment
- Elevated stack chemical and portable releases systems with embedded and/or wireless diagnostics
- Deployments of single point sensors, matrix monitoring, and thermal and hyper-spectral cameras
- Turbulence enhancement gas.

 **Radiological/Nuclear Sensing**

- Miniaturized low swap, low weight and low power sensors
- Trace analysis
- Spectroscopy laboratories
- Field testing and evaluation of new and novel technologies
- Custom materials for diverse applications
- Sample collectors with unique form factors
- Advanced R&D and accelerated development cycles
- Developed highly sensitive detectors and advanced intelligence analytics to detect minute traces of various substances related to WMD threats
- Ability to provide immediate, continuous monitoring of background levels and spikes, which could indicate malicious release of a WMD agent.
- Ability to provide over 20 isotopes (120 sources), special nuclear material and medical sources.